



**EVENT DATA RECORDER
FACTUAL REPORT**

**ATTACHMENT – G
2001 BlueBird Schoolbus
Engine ECM Data**

**GRAY SUMMIT, MISSOURI
HWY-10-MH-018**

Inquire Data Extraction Properties

File Name,I45968926_0_20100810152700.csv

Engine Serial Number,45968926

Customer Name,

Customer Unit Number, Bus2 Boys

Group Name,New Group

Engine Serial Number,"45968926"

Engine Make,"CMMNS"

Engine Model,"ISB 190 "

ECM Serial Number,"2022622"

Vehicle ID,"1BABHCPH11F095515"

Vehicle Unit Number," "

Vehicle Make,"BLUE BIRD CORP "

Vehicle Model,"A3FE3408"

ECM,"CM550"

ECM State,"Good"

Engine Program ID,"13250"

System ID and Dataplate,""

System ID and Dataplate - Calibration Information

Calibration Software Phase,"070410E5", ""

Calibration Time/Date Stamp,"040300140647", ""

Calibration Voltage Range High,"0", "V"

Calibration Voltage Range Low,"0", "V"

DO Option,"9189", ""

ECM Code," J90664.08", ""

Other Options," ", ""

SC Option,"6069", ""

System ID and Dataplate - Customer Information

Customer Location," ", ""

Customer Name," ", ""

Customer Unit Number," ", ""

System ID and Dataplate - ECM Information

ECM Name,"EN", ""

ECM Option,"CMMNS", ""

ECM Part Number,"3944124", ""
ECM Serial Number,"2022622", ""
ECM Voltage Range High,"0", "V"
ECM Voltage Range Low,"0", "V"

System ID and Dataplate - Engine Information

Engine Build Date,"40000", ""
Engine Make,"CMMNS", ""
Engine Model,"ISB 190", ""
Engine Serial Number,"45968926", ""

System ID and Dataplate - System Information

Advertised Power at RPM,"190", "hp"
Advertised Power RPM,"2600", "RPM"
Control Parts List,"2686", ""
Fuel Code,"98639", ""
Governed Speed,"2600", "RPM"
Peak Torque at RPM,"520", "ft*lb"
Peak Torque RPM,"1400", "RPM"
Torque Rise,"0", "Percent"

System ID and Dataplate - Vehicle/OEM Information

OEM Name,"BLUE BIRD CORP", ""
OEM Vehicle or Equipment Model,"A3FE3408", ""
Vehicle Identification Number (VIN) or Equipment Serial Number,"1BABHCPH11F095515", ""
Vehicle or Equipment Year,"2001", ""

Features and Parameters

Accelerator Maximum Manual Vehicle Switch,"Disable"

Accelerator Options, ""

Accelerator Interlock,"Enable", ""
Engine Governor Type,"Automotive", ""
Remote Accelerator,"Disable", ""
Switchable Accelerator Type,"Disable", ""

Cruise Control,"Enable"

Auto-Resume,"Enable", ""
Lower Droop,"3", "mph"
Maximum Speed,"70", "mph"
Save Set Speed,"Enable", ""
Switch Usage,"Set/Coast", ""

Upper Droop,"0","mph"

Engine Brake Control,""

Cruise Control Activation,"Disable",""

Vehicle Braking,"Driveline Retarder",""

Engine Protection,"Enable"

Engine Protection Shutdown,"Disable",""

Engine Speed,""

High Speed Governor Switched Speed,"3000","RPM"

Maximum Engine Speed without Vehicle Speed Sensor,"2200","RPM"

Fan Control,""

Air Conditioner Pressure Switch Controls Fan,"Disable",""

Fan Clutch Logic,"12/24V ON",""

Fan On During Engine Braking,"Disable",""

Fan Type,"On/Off",""

Manual Fan Switch,"Disable",""

Fast Idle Warmup,"Disable"

Gear-Down Protection,"Disable"

Idle Shutdown,"Disable"

Idle Speed Adjustment,""

Low Idle Adjustment,"Enable",""

Low Idle Speed,"800","RPM"

Maintenance Monitor,"Disable"

OEM Sensors,""

Dual Outputs Based on Sensed Parameters,"Enable",""

Powertrain Protection,"Disable"

PTO/Remote PTO,"Enable"

Alternate PTO,"Disable",""

Clutch Override in PTO,"Disable",""

Ignore Vehicle Speed Sensor,"Disable",""

Maximum Engine Load in PTO,"100","ft*lb"

Maximum PTO Speed,"2200","RPM"

Maximum Vehicle Speed in PTO,"10","mph"

Minimum PTO Speed,"700","RPM"

PTO Additional Switch Speed,"825","RPM"

PTO Ramp Rate,"25","rpm/s"
PTO Resume Switch Speed,"800","RPM"
PTO Set Switch Speed,"800","RPM"
Service Brake Override in PTO,"Enable", ""

PTO/Remote PTO - Accelerator Override in PTO,"Disable"

PTO/Remote PTO - Remote PTO,"Enable"

Number of Remote PTO Set Speeds,"1", ""
Remote Set Speed 1,"1300","RPM"

SAE J1939 Multiplexing,"Disable"

Transmission, ""
Gear Down Ratio,"1.00", ""
Pulse Width Modulation Output Type,"60% Throttle ON,45% Throttle Off", ""
Top Gear Ratio,"0.74", ""
Transmission Type,"Automatic", ""

Trip Information,"Enable"
Engine Distance Offset,"0", "mi"
Engine Hours Offset,"0", "hrs"

Vehicle Speed Sensor Anti-Tampering,"Disable"

Vehicle Speed, ""
Accelerator Maximum,"80", "mph"
On-Highway Type,"On Highway", ""
Pulses Per Distance,"43298", "rev/mi"
Rear Axle Ratio,"5.38", ""
Road Speed Governor Lower Droop,"3", "mph"
Road Speed Governor Upper Droop,"0", "mph"
Tailshaft Gear Teeth,"16", ""
Tire Revolutions per Distance,"503", "rev/mi"
Two Speed Rear Axle,"Disable", ""
Two Speed Rear Axle Ratio,"5.38", ""
Vehicle Speed Sensor Type,"Magnetic", ""

Trip Information

All Trips (Cumulative), ""
ECM Distance,"105115.78", "mi"
ECM Time (Key On Time),"5832:34:25", "HH:MM:SS"
Engine Average Load,"26.00", "Percent"

Engine Brake Actuations,"436018", ""
Engine Brake Distance,"22308", "mi"
Engine Brake Time,"3178:03:57", "HH:MM:SS"
Engine Distance,"105115.78", "mi"
Engine Hours (Engine Run Time),"5812:19:07", "HH:MM:SS"
Fuel Used,"9988.6", "gal"
Idle Fuel,"923.4", "gal"
Idle Time,"1940:34:25", "HH:MM:SS"
PTO Fuel Used,"0.0", "gal"
PTO Time,"11:09:02", "HH:MM:SS"
Service Brake Distance,"13984", "mi"
Service Brakes Time,"920:28:31", "HH:MM:SS"

Trip Since Last Reset, ""

Average Fuel Economy,"10.51", "mpg"
Average Fuel Rate,"1.71", "gph"
Average Load Factor,"26.00", "Percent"
Average Vehicle Speed,"18", "mph"
Distance,"105092.41", "mi"
Fan on Due to Air Conditioner System,"0:00:00", "HH:MM:SS"
Fan On Due to Manual Switch,"0:00:00", "HH:MM:SS"
Fan On Time,"124:31:39", "HH:MM:SS"
Fuel Used,"9988.6", "gal"
Maximum Engine Speed,"2960", "RPM"
Maximum Vehicle Speed,"83", "mph"
PTO Fuel Used,"0.0", "gal"
PTO Percent Time,"0.19", "Percent"
PTO Time,"11:09:01", "HH:MM:SS"
Time,"5812:13:47", "HH:MM:SS"

Data Monitors

Accelerator Interlock Switch,"Locked", ""
Battery Voltage,"12.3", "V",
Calibration Software Phase,"070410E5", ""
Cam Sensor Engine Speed,"0", "RPM",
Clutch Switch,"Released", ""
Coolant Level,"High", ""
Coolant Temperature,"92.6", "F",
Coolant Temperature Signal Voltage,"2.8", "V",
Crank Sensor Engine Speed,"0", "RPM",
Cruise Set/Resume Switch,"None", ""
Cruise/PTO Switch,"Off", ""
Diagnostic Switch,"Off", ""
Engine Brake Switch,"Off", ""
Engine Harness Supply Voltage,"0.50", "V",
Engine Oil Pressure,"0.0", "psi",

Engine Oil Pressure Signal Voltage,"0.5","V",
Engine Speed,"0","RPM",
Engine Speed Sensor Supply Voltage,"5.0","V",
Engine Torque Limit Switch,"On", "",
Fan Clutch Status,"Off", "",
Fuel Economy,"0.000","mpg",
Fuel Temperature,"95.2","F",
Idle Increment Switch,"None", "",
Intake Air Heater #1,"Off", "",
Intake Air Heater #2,"Off", "",
Intake Manifold Pressure,"0.0","InHg",
Intake Manifold Pressure Signal Voltage,"0.5","V",
Intake Manifold Temperature,"93.5","F",
Intake Manifold Temperature Signal Voltage,"2.7","V",
J1939 Engine Control Source,"None", "",
J1939 Engine Control Status,"Inactive", "",
J1939 Retarder Control Source,"None", "",
J1939 Retarder Control Status,"Inactive", "",
Key Offs,"12431", "",
Key Switch,"On", "",
Manual Fan Switch,"On", "",
OEM Harness Supply Voltage,"5.0","V",
Percent Fuel,"0.00","Percent",
Percent Throttle,"0","Percent",
Powertrain Protection Torque Limit,"0","ft*lb",
PTO Additional Switch,"Off", "",
PTO Set / Resume Switch,"Neutral", "",
PTO Status,"Inactive", "",
Rear Axle Ratio Switch,"Low", "",
Remote PTO Switch,"Off", "",
Remote Throttle Switch,"Off", "",
Service Brake Switch,"Depressed", "",
Throttle Signal Voltage,"0.3","V",
Throttle Status (Idle Validation),"On Idle", "",
Throttle Supply Voltage,"5.0","V",
Total ECM Time (Key On Time),"5837:38:08","HH:MM:SS",
User Fueling State,"Engine Stop", "",
Vehicle Speed,"0","mph",
VP44 Calculated Engine Speed,"0","RPM",
VP44 Fault Status,"12", "",
VP44 Voltage,"12.4","V",
VP44 Voltage Drop,"0.0","V",
Water-In-Fuel Status,"No", "",

Fault Information

Fault Code,"Fault Status","Fault Count","Lamp","Description","PID","SID","J1587 FMI","J1939 FMI","SPN"

111,"Inactive","1","Amber","Possible no effect or engine may run rough or not start.",,,,,"254","12",,,,,"

434,"Inactive","2","Amber","None on performance. Fault code table, trip information data and maintenance monitor data may be inaccurate.",,,,,"251","2",,,,,"

Fault Snapshot

Fault Code 111,"First Occurrence",,"Last Occurrence"

Battery Voltage,"8.6","V","8.6","V"

Clutch Switch,"Released",,,,,"Released",,""

Coolant Level,"Low",,,,,"Low",,""

Coolant Temperature,"94.8","F","94.8","F"

Cruise Set/Resume Switch,"None",,,,,"None",,""

Cruise/PTO Switch,"Off",,,,,"Off",,""

Diagnostic Switch,"Off",,,,,"Off",,""

Engine Oil Pressure,"0.0","psi","0.0","psi"

Engine Speed,"0","RPM","0","RPM"

Fan Clutch Status,"Off",,,,,"Off",,""

Fuel Temperature,"0.0","F","0.0","F"

Idle Increment Switch,"None",,,,,"None",,""

Idle Switch (Idle Validation),"Fault",,,,,"Fault",,""

Intake Air Heater,"Off",,,,,"Off",,""

Intake Manifold Pressure,"0.0","InHg","0.0","InHg"

Intake Manifold Temperature,"92.8","F","92.8","F"

Key Switch,"Off",,,,,"Off",,""

Percent Fuel,"0.00","Percent","0.00","Percent"

Percent Throttle,"0","Percent","0","Percent"

Remote PTO Switch,"Off",,,,,"Off",,""

Service Brake Switch,"Released",,,,,"Released",,""

Total ECM Time (Key On Time),"5837:21:50","HH:MM:SS","5837:21:50","HH:MM:SS"

Total Engine Hours (Engine Run Time),"5812:19:06","HH:MM:SS","5812:19:06","HH:MM:SS"

User Fueling State,"None",,,,,"None",,""

Vehicle Speed,"0","mph","0","mph"

VP44 Fault Status,"0",,,,,"0",,""

Fault Code 434,"First Occurrence",,"Last Occurrence"

Battery Voltage,"8.6","V","8.6","V"

Clutch Switch,"Released",,,,,"Released",,""

Coolant Level,"Low",,,,,"Low",,""

Coolant Temperature,"94.8","F","94.8","F"

Cruise Set/Resume Switch,"None",,,,,"None",,""

Cruise/PTO Switch,"Off",,,,,"Off",,""

Diagnostic Switch,"Off",,,,,"Off",,""

Engine Oil Pressure,"0.0","psi","0.0","psi"

Engine Speed,"0","RPM","0","RPM"

Fan Clutch Status,"Off",,,,,"Off",,""

Fuel Temperature,"0.0","F","0.0","F"

Idle Increment Switch,"None",,,,,"None",,""

Idle Switch (Idle Validation),"Fault", "", "Fault", ""
Intake Air Heater,"Off", "", "Off", ""
Intake Manifold Pressure,"0.0", "InHg", "0.0", "InHg"
Intake Manifold Temperature,"92.8", "F", "92.8", "F"
Key Switch,"Off", "", "Off", ""
Percent Fuel,"0.00", "Percent", "0.00", "Percent"
Percent Throttle,"0", "Percent", "0", "Percent"
Remote PTO Switch,"Off", "", "Off", ""
Service Brake Switch,"Released", "", "Released", ""
Total ECM Time (Key On Time),"5837:21:50", "HH:MM:SS", "5837:21:50", "HH:MM:SS"
Total Engine Hours (Engine Run Time),"5812:19:06", "HH:MM:SS", "5812:19:06", "HH:MM:SS"
User Fueling State,"None", "", "None", ""
Vehicle Speed,"0", "mph", "0", "mph"
VP44 Fault Status,"0", "", "0", ""

Audit Trail

Record Number,"Tool Name", "Tool ID", "User Type", "User ID", "ECM Time (Key on time)",

Audit Trail Change Codes

1,"INSITE", "631001142901", "Software", "8A1AED23", "4917:08:00" HH:MM:SS

„, "027 - Reset Inactive Fault Codes"

”

2,"INSITE", "060222402901", "Software", "4D6721E7", "3816:52:18" HH:MM:SS

„, "027 - Reset Inactive Fault Codes"

”

3,"Manta", "CEC010000CA1", "Software", "CEC0FEED", "0:03:25" HH:MM:SS

„, "009 - Maximum Vehicle Speed in Top Gear"

”

SAE J1939 Powertrain Control

Event,"Source", "Destination", "Modes", "ECM Time(Start)", "Duration"

Maintenance Monitor

„, "Most Recent", „, "Oldest"

Engine Abuse History

Engine Oil Pressure,"00:00:06", "HH:MM:SS"

Engine Oil Pressure Severity1, "13-10", "psi"

Engine Oil Pressure,"00:00:05", "HH:MM:SS"

Engine Oil Pressure less than boundary Severity2, "10-8", "psi"

Engine Oil Pressure,"00:06:36", "HH:MM:SS"

Engine Oil Pressure less than boundary Severity3, " < 8", "psi"

Engine Oil Pressure,"00:06:48", "HH:MM:SS"

Engine Oil Pressure less than boundary Severity Total, " < 13", "psi"

Engine Coolant Temperature,"00:00:00","HH:MM:SS"
Engine Coolant Temperature Severity1,"215-220","F"
Engine Coolant Temperature,"00:00:00","HH:MM:SS"
Engine Coolant Temperature greater than boundary Severity2,"220-235","F"
Engine Coolant Temperature,"00:00:00","HH:MM:SS"
Engine Coolant Temperature greater than boundary Severity3," > 235","F"
Engine Coolant Temperature,"00:00:00","HH:MM:SS"
Engine Coolant Temperature greater than boundary Severity Total," > 215","F"

Engine Speed,"00:00:00","HH:MM:SS"
Engine Overspeed Severity1,"3200-3300","RPM"
Engine Speed,"00:00:00","HH:MM:SS"
Engine Overspeed greater than boundary Severity2,"3300-3400","RPM"
Engine Speed,"00:00:00","HH:MM:SS"
Engine Overspeed greater than boundary Severity3," > 3400","RPM"
Engine Speed,"00:00:00","HH:MM:SS"
Engine Overspeed greater than boundary Severity Total," > 3200","RPM"

Intake Manifold Air Temperature,"00:10:24","HH:MM:SS"
Intake Manifold Air Temperature Severity1,"180-220","F"
Intake Manifold Air Temperature,"00:00:00","HH:MM:SS"
Intake Manifold Air Temperature greater than boundary Severity2,"220-260","F"
Intake Manifold Air Temperature,"00:00:00","HH:MM:SS"
Intake Manifold Air Temperature greater than boundary Severity3," > 260","F"
Intake Manifold Air Temperature,"00:10:24","HH:MM:SS"
Intake Manifold Air Temperature greater than boundary Severity Total," > 180","F"

Engine Hours,"1040:07:58","HH:MM:SS"
Engine Protection
Description,"Fault Code","Occurrence","Value",,"Fault Duration",,"Total ECM Time (Key on Time)",

High Coolant Temperature (Fueling) - Power derate and possible engine shutdown if engine protection shutdown feature is enabled., "146","Newest","220.2","F","0:00:01","HH:MM:SS","4907:53:10","HH:MM:SS"

Duty Cycle Monitor

Short Term Map 1

Torque
100.00,,0.1%,0.7%,0.8%,1.5%,,,
90.00,0.0%,0.3%,1.0%,1.0%,1.1%,0.9%,0.1%,0.0%
70.00,0.0%,0.9%,2.5%,3.0%,1.2%,0.2%,0.0%,0.0%
50.00,0.0%,2.9%,5.5%,2.3%,0.5%,0.3%,0.0%,0.0%
30.00,0.2%,1.9%,4.1%,0.8%,0.1%,0.2%,0.0%,0.0%
10.00,23.2%,0.5%,0.8%,0.0%,0.0%,0.2%,0.0%,0.0%

0.00,21.8%,,,,,,0.1%,0.0%,0.0%
,,,,14.8%,,,,,0.0%

Engine Speed (RPM),900,1300,1600,1900,2200,2500,2600,2700,0

Map Start Time,"0:00:02","HH:MM:SS"
Map Hours Remaining,"0:00:00","HH:MM:SS"
Advertised Power at RPM,"190","hp"
Advertised Power RPM,"2600","RPM"
Peak Torque at RPM,"520","ft*lb"
Peak Torque RPM,"1400","RPM"

Short Term Map 2

Torque
100.00,,0.2%,0.8%,0.7%,0.9%,,,
90.00,0.0%,0.4%,1.4%,1.2%,1.1%,0.2%,0.0%,0.0%
70.00,0.0%,1.1%,3.1%,3.5%,1.3%,0.0%,0.0%,0.0%
50.00,0.0%,3.3%,6.6%,3.0%,0.4%,0.0%,0.0%,0.0%
30.00,0.1%,2.6%,5.2%,1.1%,0.0%,0.0%,0.0%,0.0%
10.00,25.8%,0.4%,1.3%,0.0%,0.0%,0.0%,0.0%,0.0%
0.00,13.6%,,,,,,0.0%,0.0%,0.0%
,,,,17.5%,,,,,0.0%

Engine Speed (RPM),900,1300,1600,1900,2200,2500,2600,2700,0

Map Start Time,"500:26:23","HH:MM:SS"
Map Hours Remaining,"0:00:00","HH:MM:SS"
Advertised Power at RPM,"190","hp"
Advertised Power RPM,"2600","RPM"
Peak Torque at RPM,"520","ft*lb"
Peak Torque RPM,"1400","RPM"

Long Term Map

Torque
100.00,,0.3%,0.7%,1.1%,2.3%,,,
90.00,0.0%,0.5%,1.0%,1.2%,1.3%,1.4%,0.1%,0.0%
70.00,0.0%,0.9%,2.3%,3.1%,1.6%,0.6%,0.0%,0.0%
50.00,0.0%,2.5%,5.0%,2.6%,1.0%,0.6%,0.0%,0.0%
30.00,0.2%,2.4%,4.2%,1.2%,0.5%,0.3%,0.0%,0.0%
10.00,24.4%,1.0%,1.5%,0.3%,0.1%,0.3%,0.0%,0.0%
0.00,17.0%,,,,,,0.1%,0.0%,0.0%
,,,,16.0%,,,,,0.0%

Engine Speed (RPM),900,1300,1600,1900,2200,2500,2600,2700,0

Map Start Time,"0:00:00","HH:MM:SS"
Map Hours Remaining,"94192:22:17","HH:MM:SS"
Advertised Power at RPM,"190","hp"
Advertised Power RPM,"2600","RPM"
Peak Torque at RPM,"520","ft*lb"
Peak Torque RPM,"1400","RPM"

OBD Monitors
Fault Code,"Description","Monitor Type","Readiness Code"
OBD is not supported for this product.

Technician's Note

Knock Count Reset

This feature is not supported by the current calibration.

Anti-Theft Protection
Vehicle Anti-Theft,"Disable", ""
Vehicle Anti-Theft Automatic Mode,"Disable", ""
New Anti-Theft Pin,"Disabled"
New Anti-Theft Pin 2,"Disabled"
New Anti-Theft Pin 3,"Disabled"
New Anti-Theft Pin 4,"Disabled"
New Anti-Theft Pin 5,"Disabled"
New Anti-Theft Pin 6,"Disabled"

Multi-Level ECM Security

ECM Passwords
Master Password,"Disabled"
Adjustable Password,"Disabled"
Reset Password,"Disabled"
OEM Password,"Disabled"

PowerSpec Enable and Password
PowerSpec End-User Authorization,"Disable", ""
PowerSpec Password,"Disabled"

Real Time Clock

Parameter,"Value","Units",
RTC Enable,"Run Time",

Real Time Clock Time,"","HH:MM:SS",

PowerSpec - Engine Dataplate Information

Report Date: 8/9/2010 4:00:20 PM

| | | | | | |
|-----------------------------|----------|--------------------------------|------------|--------------------------|----------|
| Engine Type | ISB | ECM Code | J90664.08 | Last Tool Used | Insite |
| Engine Serial Number | 45968926 | Software Phase | 7.4.16.229 | Customer Name | |
| Unit Number | | ECM Runtime hh:mm:ss | 5837:16:0 | PowerSpec Version | 4.2.2.11 |

| ECM Information | Value |
|-------------------------------------|-----------------------|
| Boot Phase | 33686276 |
| Core Based | True |
| Module ID | 17742 |
| Module Name | CM550 |
| ECM Serial Number | 2022622 |
| ECM Part Number | 3944124 |
| Engine Information | Value |
| Engine Model | ISB |
| Engine Build Date | N/A |
| Engine Family | ISB/ISC/ISL Phase 7.4 |
| DO Option | 9189 |
| SC Option | 6069 |
| Engine Horse Power | 190 |
| Engine Horse Power RPM | 2600 |
| Engine Torque | 520 |
| Engine Torque RPM | 1400 |
| Vehicle Information | Value |
| Vehicle Identification Number (VIN) | 1BABHCPH11F095515 |
| OEM Vehicle or Equipment | 2001 |
| OEM Name | BLUE BIRD CORP |
| OEM Vehicle Equipment Model | A3FE3408 |
| Customer Location | |
| Customer Name | |

PowerSpec - Engine Fault Report

Report Date: 8/9/2010 3:56:31 PM

| | | | | | |
|-----------------------------|----------|--------------------------------|------------|--------------------------|----------|
| Engine Type | ISB | ECM Code | J90664.08 | Last Tool Used | Insite |
| Engine Serial Number | 45968926 | Software Phase | 7.4.16.229 | Customer Name | |
| Unit Number | | ECM Runtime hh:mm:ss | 5837:12:14 | PowerSpec Version | 4.2.2.11 |

Currently there are NO active or inactive faults.

PowerSpec - Current Engine Feature Settings

Report Date: 8/9/2010 3:58:12 PM

| | | | | | |
|-----------------------------|----------|--------------------------------|------------|--------------------------|----------|
| Engine Type | ISB | ECM Code | J90664.08 | Last Tool Used | Insite |
| Engine Serial Number | 45968926 | Software Phase | 7.4.16.229 | Customer Name | |
| Unit Number | | ECM Runtime hh:mm:ss | 5837:13:56 | PowerSpec Version | 4.2.2.11 |

Fuel Economy

| Road Speed Governor | Value | Unit |
|------------------------------------------------------|--------------|-------------|
| Accelerator Max Road Speed | 80 | mph |
| Accelerator Lower Droop | 3 | mph |
| Accelerator Upper Droop | 0 | mph |
| Accelerator Maximum Vehicle Speed Adjust (Smart RSG) | Disabled | |
| Gear Down Protection | Value | Unit |
| Gear Down Protection Feature | Disabled | |
| Gear Down Protection Heavy Load Vehicle Speed | 90 | mph |
| Gear Down Protection Light Load Vehicle Speed | 90 | mph |
| Idle Speed Control | Value | Unit |
| Idle Engine Speed | 800 | rpm |
| Idle Adjustment Switch | Enabled | |
| Idle Shutdown | Value | Unit |
| Idle Shutdown | Disabled | |
| Idle Shutdown Timer | 1:0:0 | hh:mm:ss |
| Idle Shutdown Manual Override | Disabled | |
| Idle Shutdown in PTO | Disabled | |
| Idle Shutdown Percent Engine Load | 15 | % |
| Fan Control | Value | Unit |
| Minimum Fan On Timer | 30 | sec |
| Fan On During Engine Braking | Disabled | |
| Manual Fan Switch | Disabled | |
| Fan Control Type | Two Speed | |
| Fan Control Clutch Logic | Active High | |
| Fan Control A/C Press Switch | Disabled | |

Driver Satisfaction

| Cruise Control | Value | Unit |
|-----------------------------------------------------|--------------------|-------------|
| Cruise Control Feature | Enabled | |
| Maximum Cruise Control Speed | 70 | mph |
| Cruise Control Lower Droop | 3 | mph |
| Cruise Control Upper Droop | 0 | mph |
| Cruise Control Save Set Speed | Enabled | |
| Cruise Control Auto-Resume | Enabled | |
| Engine Brakes | Value | Unit |
| Engine Brake Cruise Control Activation | Disabled | |
| Cruise Control Speed Delta for Minimum Engine Brake | 3 | mph |
| Driveline Brake Type | Driveline Retarder | |
| Expansion | Disabled | |
| Accelerator Control | Value | Unit |
| Accelerator Type | Automotive | |
| Remote Accelerator | Disabled | |

Asset Utilization

| PTO/Remote PTO | Value | Unit |
|-----------------------------------------------|--------------|-------------|
| PTO Feature | Enabled | |
| PTO Maximum Engine Load | 100 | lb ft |
| PTO Service Brake Override | Enabled | |
| PTO Maximum Vehicle Speed | 10 | mph |
| PTO Maximum Engine Speed | 2200 | rpm |
| PTO Minimum Engine Speed | 700 | rpm |
| PTO Accelerator Override | Disabled | |
| PTO Accelerator Override Maximum Engine Speed | 3000 | rpm |
| PTO Set Engine Speed | 800 | rpm |
| PTO Resume Engine Speed | 800 | rpm |
| PTO Additional Speed Switch Engine Speed | 825 | rpm |
| PTO Engine Speed Accel/Coast Ramp Rate | 25 | rpm/s |
| PTO Clutch Override | Disabled | |
| Remote PTO Number of Speed Settings | 1 | |
| Remote PTO Speed Setting 1 | 1300 | rpm |
| Remote PTO Speed Setting 2 | 950 | rpm |
| Remote PTO Speed Setting 3 | 950 | rpm |
| Remote PTO Speed Setting 4 | 950 | rpm |
| Remote PTO Speed Setting 5 | 950 | rpm |
| Alternate PTO Enable | Disabled | |
| Maintenance Monitor | Value | Unit |
| Maintenance Monitor Mode | Automatic | |
| Interval Factor | 1.0 | |
| Maintenance Monitor Distance Interval | 9000 | mi |
| Maintenance Monitor Time Interval | 250 | h |
| Interval Alert Percentage | 100 | % |
| Maintenance Monitor | Disabled | |
| Maintenance Monitor Leading Interval | Distance | |

Asset Protection

| Engine Protection | Value | Unit |
|---------------------------------------------|--------------|-------------|
| Engine Protection Shutdown Feature | Disabled | |
| Manual Override | Disabled | |
| Anti-Tampering Measures | Value | Unit |
| Maximum Engine Speed without VSS | 2200 | rpm |
| Vehicle Speed Sensor (VSS) Tamper Detection | Disabled | |
| Powertrain Protection | Value | Unit |
| Max Torque-Axle/Driveshaft | 31000 | lb ft |
| Max Torque-Switched | 2000 | lb ft |
| Max Torque-Top Gear Range | 1000 | lb ft |
| Top Gear Range | 2.00 | Ratio |
| Intermediate Gear Range | 3.00 | Ratio |
| Bottom Gear Range | 4.00 | Ratio |
| Max Torque-Inter. Gear Range | 1000 | lb ft |
| Max Torque-Bottom Gear Range | 1000 | lb ft |
| Max Torque-Zero Vehicle Speed | 1000 | lb ft |
| Powertrain Protection | Disabled | |
| Lugback | Disabled | |
| Parameter Security | Value | Unit |
| | | |

| | | |
|--------------------------------|--|--|
| Current Engine Master Password | | |
| Current Engine OEM Password | | |
| Engine Reset Password | | |

Vehicle Setup

| Driveline Configuration | Value | Unit |
|----------------------------------|----------------------------------|-------------|
| Rear Axle Ratio | 5.38 | |
| Tire Size | 503 | rev/mi |
| Transmission Top Gear Ratio | 0.74 | Ratio |
| Transmission One Gear Down Ratio | 1.00 | Ratio |
| Cruise Control Switch | Value | Unit |
| Cruise Control Switch Setup | Set/Coast (Resume/Accelerate) | |

Asset Management

| Trip Information | Value | Unit |
|-------------------------|--------------|-------------|
| Engine Hours Offset | 0.00 | h |
| Engine Distance Offset | 0.00 | mi |

Vehicle Setup

| Vehicle Setup Parameters | Value | Unit |
|--------------------------------------|-----------------|-------------|
| Number of Tailshaft Gear Teeth | 16 | |
| Vehicle Speed Sensor Type | Magnetic | |
| Digital Pulses Per Mile | 43298 | puls/mi |
| Transmission Type | Automatic | |
| Vehicle Setup Application | ON Highway | |
| Transmission Pulse | 60% On, 45% Off | |
| PWM Frequency | 125 | Hz |
| Dual Outputs | Enabled | |
| Switched Maximum Engine Speed | Value | Unit |
| Switched Maximum Operating Speed | 3000 | rpm |

PowerSpec - Engine Trip Information Report

Report Date: 8/9/2010 3:54:37 PM

| | | | | | |
|-----------------------------|----------|--------------------------------|------------|--------------------------|----------|
| Engine Type | ISB | ECM Code | J90664.08 | Last Tool Used | Insite |
| Engine Serial Number | 45968926 | Software Phase | 7.4.16.229 | Customer Name | |
| Unit Number | | ECM Runtime hh:mm:ss | 5837:10:20 | PowerSpec Version | 4.2.2.11 |

Trip Data Since Last Reset

| Trip Summary | Value | Unit | |
|----------------------------------|--------------|-----------------|--|
| Average Fuel Economy | 10.52 | mpg | |
| Drive Average Fuel Economy | 11.60 | mpg | |
| % Idle Time | 33.4 | % | |
| % PTO Time | 0.2 | % | |
| % PTO Non-Moving Time | 0.2 | % | |
| % Top Gear Distance | 47.7 | % | |
| % Gear Down Distance | 25.2 | % | |
| % Cruise Distance | 3 | % | |
| Maximum Vehicle Speed | 83 | mph | |
| Number of Sudden Decelerations | 12 | | |
| Trip Distance | 105092.41 | miles | |
| Total Engine Hours | 5832:6:36 | hh:mm:ss | |
| Trip Time | 5812:13:48 | hh:mm:ss | |
| Distance | Value | Unit | |
| Trip Distance | 105092.41 | miles | |
| Drive Distance | 105092.41 | miles | |
| Cruise Distance | 3119.02 | miles | |
| Top Gear Distance | 50089.91 | miles | |
| Gear Down Distance | 26450.50 | miles | |
| PTO Moving Distance | 0.00 | miles | |
| Time | Value | Unit | |
| Trip Time | 5812:13:48 | hh:mm:ss | |
| Top Gear Time | 1625:46:48 | hh:mm:ss | |
| Gear Down Time | 802:9:36 | hh:mm:ss | |
| PTO Moving Time | 0:0:0 | hh:mm:ss | |
| PTO Non-Moving Time | 11:9:0 | hh:mm:ss | |
| Idle Time | 1940:34:12 | hh:mm:ss | |
| Vehicle Overspeed 1 Time | 155:57:36 | hh:mm:ss | |
| Vehicle Overspeed 2 Time | 4:45:0 | hh:mm:ss | |
| Coast Time Out of Gear | 154:13:12 | hh:mm:ss | |
| Fan On Time due to Manual Switch | 0:0:0 | hh:mm:ss | |
| Fuel Used | Value | Unit | |
| Trip Fuel Used | 9988.63 | gallons | |
| Drive Fuel Used | 9059.00 | gallons | |
| PTO Moving Fuel Used | 0.00 | gallons | |
| PTO Non-Moving Fuel Used | 0 | gallons | |
| Idle Fuel Used | 923.38 | gallons | |
| Counts | Value | Unit | |
| Service Brake Actuations / 1K | 3768.13 | brakes/1K miles | |
| Number of Sudden Decelerations | 12 | | |
| | | | |

| | | | |
|------------------------------|--------------|-------------|--|
| Number of Coasts Out of Gear | 461189 | | |
| Maximum Speeds | Value | Unit | |
| Maximum Engine Speed | 2960 | rpm | |
| Maximum Vehicle Speed | 83 | mph | |
| Aftertreatment Info | Value | Unit | |

All Trips (Cumulative)

| | | | |
|------------------------|--------------|-------------|--|
| Totals | Value | Unit | |
| Total Engine Distance | 105092.41 | miles | |
| Engine Distance Offset | 0 | miles | |
| Total Engine Hours | 5832:6:36 | hh:mm:ss | |
| Total ECM Distance | 105115.78 | miles | |
| Total Fuel Used | 9988.63 | gallons | |
| Total Idle Fuel Used | 923.38 | gallons | |
| Total PTO Fuel Used | 0.00 | gallons | |
| Total PTO Time | 11:9:0 | hh:mm:ss | |